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Software version

DEWEConfig Software user manual corresponds with version software version 5.4.1a

Printing notice

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Support information

For any support please contact your local distributor first or DEWETRON directly.

For Asia and Europe, please contact:

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The telephone hotline is available Monday to Friday between 08:00 and 17:00 CET (GMT -1:00)

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Email: support@dewamerica.com
Web: http://www.dewamerica.com

The telephone hotline is available Monday to Friday between 08:00 and 17:00 GST (GMT +5:00)

Support

Notes

1 Initial Setup

1.1 About DEWEConfig

DEWEConfig is a nice tool to address and configure DEWETRON DAQ and PAD series amplifiers.

1.1.1 DEWEConfig functions

The software supports all new amplifiers, but also older versions. The following table should give you an overview of the amplifier setting functions:

Module name	Range	Filter	Additional programmable functions
DAQN-DMM	-	-	
DAQP-DMM	✓	✓	
DAQN-V	-	-	
DAQP-V	✓	✓	
DAQP-µV	✓	✓	
DAQN-BRIDGE	-	-	
DAQP-BRIDGE	✓	✓	
DAQP-BRIDGE-A	✓	✓	Half- and quarter bridge completion, excitation voltage, bridge zero, amplifier zero, shortcut input, shunt calibration, lowpass filter type selection
DAQP-BRIDGE-B	✓	✓	Half- and quarter bridge completion, excitation voltage, bridge zero, amplifier zero, shortcut input, shunt calibration, lowpass filter type selection
DAQP-ACC	✓	✓	
DAQP-ACC-A	✓	✓	
DAQN-CHARGE	-	-	
DAQP-CHARGE	✓	✓	
DAQP-CHARGE-A	✓	✓	ICP® / Charge selection, highpass filter, integration: none, single, double
DAQP-CHARGE-B	✓	✓	
DAQP-FREQ	✓	✓	
DAQP-FREQ-A	✓	✓	Trigger level selection, find trigger level, AC/DC coupling, fast/slow output filter
DAQN-THERM	-	-	
DAQN-RTD	-	-	
DAQN-POT	-	-	
DAQN-DIFF	-	-	
DAQN-AIN	-	-	
PAD-V8	✓	-	
PAD-V8-P	✓	-	
PAD-VTH8	✓	-	
PAD-TH8	✓	-	
PAD-TH8-P	✓	-	Recognition of thermocouple type with PAD-CB8-x-P connector
PAD-RTD3	✓	-	
PAD-AO1	✓	-	
PAD-CNT2	✓	-	
PAD-DI8	-	-	
PAD-DO7	-	-	

DEWEConfig will be updated continuously to recognize new amplifiers and to support new amplifier firmware versions.

If your amplifiers don't have above mentioned functions, please contact DEWETRON.

1.1.2 System requirements

To achieve a good performance, we recommend the following hardware:

- WINDOWS 98 / ME / NT4.0 / 2000 / XP
- Intel Pentium processor
- 128 MB RAM or higher
- Approx. 2 MB free harddisk space for DEWEConfig
- DEWETRON system with installed DAQ and PAD series amplifiers, connected to the RS-232 interface

1.2 Installation

1.2.1 DEWEConfig installation

To install DEWEConfig, just follow the instructions of the installation shield.

DEWEConfig will be installed automatically in the following directory: C:\DEWETRON\Program\DEWEConfig

After installation, you may start DEWEConfig directly from the Windows desktop using the DEWEConfig icon. During the startup, you will see the following window showing the current software version:

DEWECONFIG VERSION INFORMATION

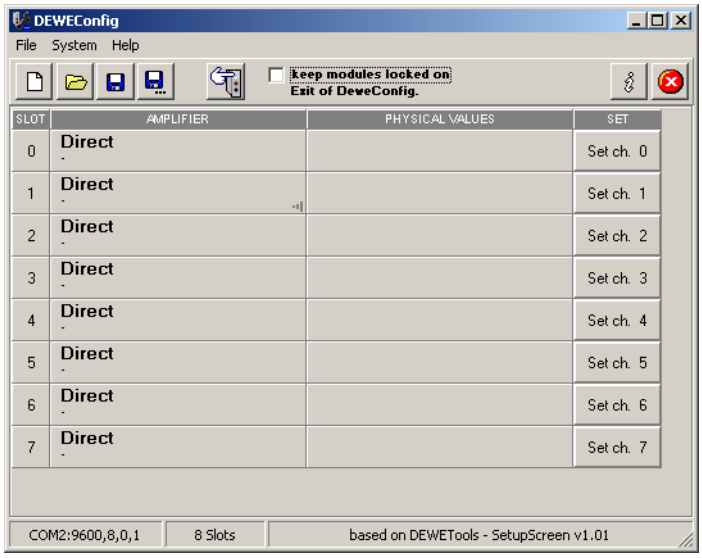
1.2.2 Installing DEWEConfig updates

Please follow the installation instructions of the readme files, which are included with any update version. Updates are available on the DEWETRON web server http://www.dewetron.com, but you can also download them directly from the FTP server ftp://ftp.dewetron.com/public/software/deweconfig.

You should always use the latest version to avoid any problems. The DEWEConfig software can be downloaded free of charge.

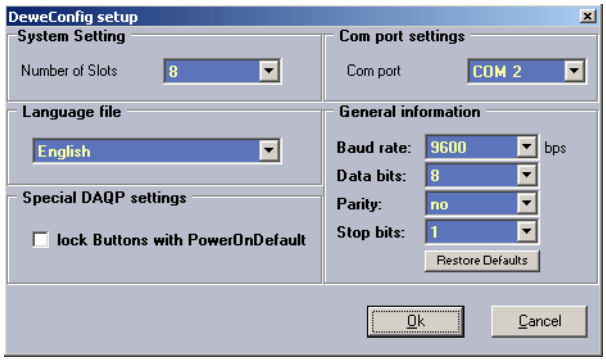
1.3 Setup DEWEConfig

When you start DEWEConfig for the first time, you have to do a few basic settings. As soon as the software has been loaded completly, the following screen appears:


DEWEConfig
File System Help
keep modules locked on Exit of DeweConfig.
SLOT
AMPLIFIER
PHYSICAL VALUES
SET
0 Direct - Set ch. 0
1 Direct - Set ch. 1
2 Direct - Set ch. 2
3 Direct - Set ch. 3
4 Direct - Set ch. 4
5 Direct - Set ch. 5
6 Direct - Set ch. 6
7 Direct - Set ch. 7
COM2:9600,8,0,1
8 Slots
based on DEWETools - SetupScreen v1.01

MAIN DEWECONFIG WORKING PLACE

Depending on the system, it can already contain amplifiers. Anyway, you should have first a look into the DEWEConfig settings. Just select ***Setup*** from the **System** menu to open the following window:



BASE DEWECONFIG SETTINGS

System setting: Number of slots

Use this function to define how much amplifiers your system may have. For example, a DEWE-2010 system normally contains 16 amplifiers, a DEWE-3010 system 8 amplifiers.

Language file

Select the software language out of the dropdown list. As a standard, the language is set to English.

Special DAQP settings

Use the lock buttons with PowerOnDefault to lock the push buttons on the amplifiers - even after power loss. Be aware that this function is not working with older amplifiers.

Com port settings

This is the most important selection, because it defines the serial port where the amplifiers are connected. The value depends from system to system, as a standard, it is set to COM1.

DEWETRON System	DEWE-Module Com Port*
DEWE-3010, DEWE-3000, DEWE-4000	COM 2
DEWE-2010, DEWE-2000	COM 1
DEWE-RACK, DEWE-BOOK	According to your PC or notebook

Be aware that the number of the COM port might vary from system to system.

Attention: please check this to ensure that you have the correct com port, as incorrect settings can cause your system to hang up, or disable other devices that are already using the same com port.

General information

This part is generally just for information - don't try to change anything, otherwise the system may not work properly any more. It is just available for special high-speed systems.

If you have changed anything and the system is not working any more, press the ***Restore Defaults*** button to restore the default settings.

After changing the parameters, press the ***OK*** button to confirm changes or press ***Cancel*** to reject changes.

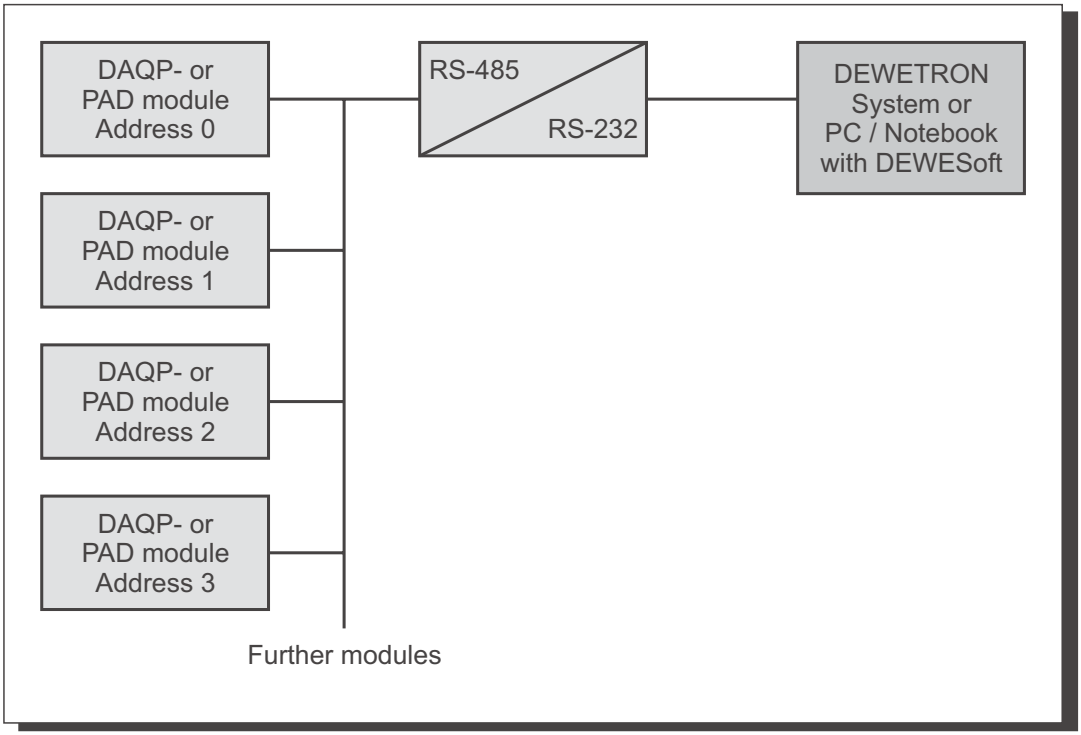
2 DEWE-Module installation

DEWEConfig is the base software tool to configure all DEWETRON DAQ and PAD series amplifiers.

2.1 Basic knowledge about DEWETRON amplifiers

First of all, you have to know that all DAQP and PAD series amplifiers have a build-in RS-485 interface. This interface is used to communicate with the amplifiers. The reason for the RS-485 interface was simple: you can connect multiple 'devices' on one bus with nearly no limitation in cable length. To identify each device (in our case each amplifier), it receives an address. In case of the DEWETRON amplifiers, the module address corresponds with the slot number.

Within DEWETRON systems, there is a RS-485 to RS-232 interface converter. For that reason, you don't have to worry about the RS-485 interface and simply communicate through one of the selected com ports (e.g. COM1).



SCHEMATIC OVERVIEW OF THE ADDRESS CONCEPT

DEWEConfig assigns the slot numbers as addresses to the amplifiers and allows also some base settings of the amplifiers. There are different ways to assign the address to the amplifiers, which are described in the following section.

2.2 Module installation tips

You can install your DAQP and PAD modules (and any DAQN module that has a small black button near the top of the module) all at once, or if you replace just one module, you can also replace just one module in the software without installing them all again.

Let's look at the initial installation of all modules. Please note that this is done for you when you receive your DEWETRON system, but if you change modules around frequently, this procedure will be very useful for you to know.

First, please do not try to do this unless you:

1) Really have DAQP, PAD, or certain DAQN modules connected to this system!
2) Have set up the com port properly in accordance with the instructions in this manual

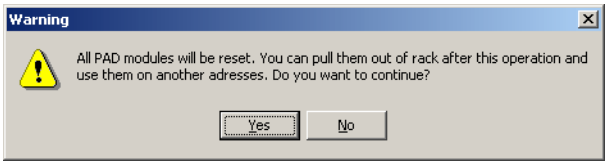
The reason for this precaution is simple: when you tell DEWEConfig to scan for your modules, it will use the com port previously defined. If there are no modules on that port, or some other device in your computer is currently using that com port, it will hang up your computer! Please proceed only if you are really using a DEWETRON system with DEWE-Modules.

2.2.1 Using the Fill Rack function to add modules

When your com port is properly set as described above, you can start the effective FillRack procedure.

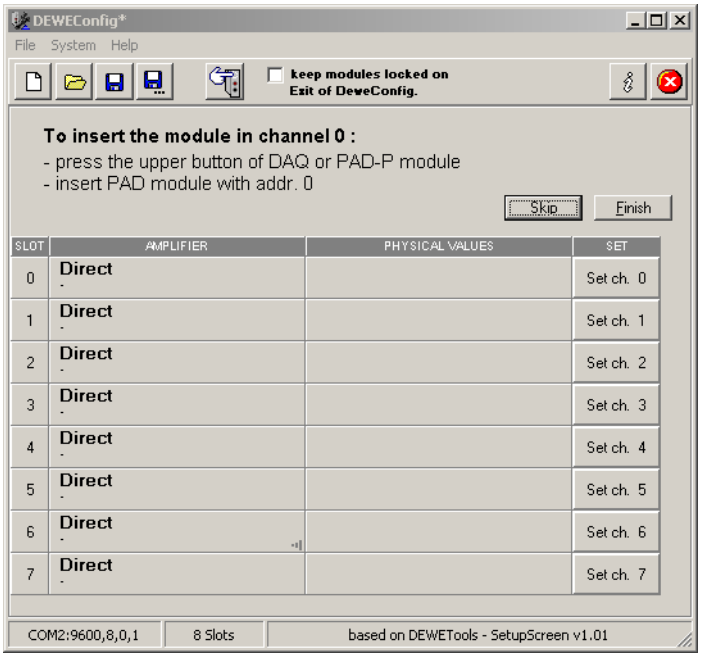
If you have any PAD modules without the small black button near the top of the module in your system, please do something FIRST:

Select the ***Reset PAD Modules*** item from the **System** menu and confirm the warning message.


Warning
All PAD modules will be reset. You can pull them out of rack after this operation and use them on another adresses. Do you want to continue?
Yes
No

Then unscrew the modules and pull them slightly out of the rack, so that their green LED's turn out. You will be instructed when to reinsert them, one at a time, in a moment.

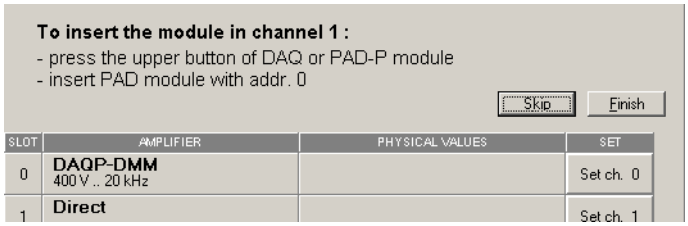
Now select the ***FillRack*** from the **System** menu or press the button. The following screen will appear:


DEWEConfig*
File System Help
keep modules locked on Exit of DeweConfig.
To insert the module in channel 0 :
- press the upper button of DAQ or PAD-P module
- insert PAD module with addr. 0
Skip
Finish
SLOT
AMPLIFIER
PHYSICAL VALUES
SET
0 Direct Set ch. 0
1 Direct Set ch. 1
2 Direct Set ch. 2
3 Direct Set ch. 3
4 Direct Set ch. 4
5 Direct Set ch. 5
6 Direct Set ch. 6
7 Direct Set ch. 7
COM2:9600,8,0,1
8 Slots
based on DEWETools - SetupScreen v1.01

THE FILL RACK COMMAND ALLOWS AN EFFICIENT MODULE INSTLLATION

DEWEConfig now asks you to either press the top black button or reinsert the PAD module into each slot, one at a time, starting with slot 0. A system beep confirms the pressed button.

After the module has been recognized, it will be displayed in the list and DEWEConfig asks you for the amplifier in slot 1.



RECOGNIZED AMPLIFIER IN SLOT 0, MORE TO COME...

If you do not have a DAQP module, PAD module, or DAQN module with a small black button near the top of the module in any slot, or if this is an empty slot, simply click the ***Skip*** button and it will move to the next module. When you are done, click the ***Finish*** button.

2.2.2 Replacing just one module

You can replace just a single module without having to run the **FillRack** function and start all over again. This is convenient when you have just swapped one or two modules out in order to do a certain test, and you do not want to enter in the input names, scaling, and re-run the calibration on the unchanged channels.

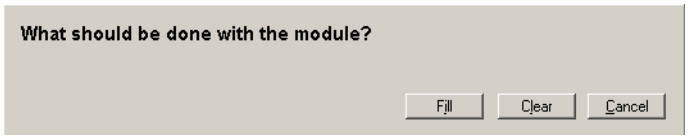
If you are installing a new/replacement DAQP series module, plug the module in. If you are installing a PAD series module, the process is a little more involved, and we will cover that second.

Installing just one DAQP series module

1. Remove the module that you are replacing, or the blank panel from the slot that you wish to plug your new/replacement module into.
2. Install the DAQP series module into this slot.
3. Double-click on the name of the module, which is the AMPLIFIER column:

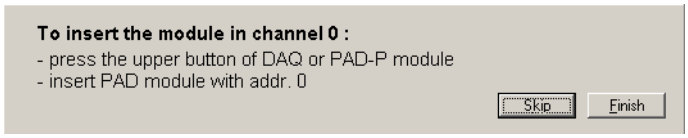
DOUBLE-CLICK ON THE NAME OF THE MODULE, LIKE "DAQP-DMM" IN THE EXAMPLE ABOVE

4. and the software will ask you a question on the screen: WHAT SHOULD BE DONE WITH THIS MODULE? With three choices: ***Fill***, ***Clear***, or ***Cancel***. ***Fill*** allows you to add your new module. ***Clear*** removes any module from this slot. ***Cancel*** leaves here without making any changes. Click ***Fill*** to add your new module.



CLICK FILL TO ADD YOUR NEW MODULE...

5. The software will now instruct you to press the top black button on the new DAQP module. When you do this, it will recognize it and add it into this slot on the screen.



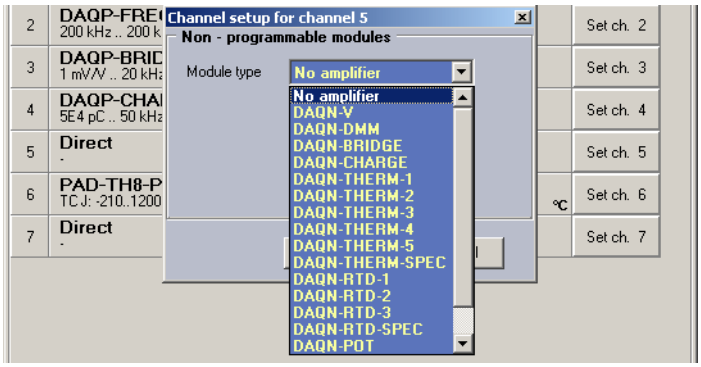
*PRESS THE TOP BLACK BUTTON ON THE NEW MODULE, OR **CANCEL** TO LEAVE WITHOUT MAKING ANY CHANGES*

6. Now just click the SETUP button for this slot and configure it as you would any other module. Notice that your configuration for the other modules is unchanged!

Installing just one DAQN or DAQ series module, or NONE

If you are replacing a DAQP series module or PAD series module with a non-programmable type, simply double-click the name of the DAQP module that you want to remove/replace, and then select **Clear** from the prompt that will appear. This will remove the programmable module from this slot and will display Direct input. Now just click the ***Set ch x*** button for this slot and then manually tell the software which non-programmable module you wish to add to this slot and select the correct input range.

Detailed information about input ranges of the DAQ / DAQN series modules is available in the DEWE-Modules technical reference manual, shipped together with your system.



SELECT THE NON PROGRAMMABLE AMPLIFIER OUT OF THE DROP-DOWN LIST

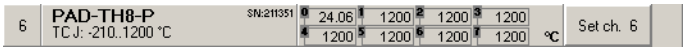
Installing just one PAD-V8-P or PAD-TH8-P module

Perform the same steps then *Installing just one DAQP series module*. This is possible, because the PAD-V8-P and PAD-TH8-P modules have the black push button.

Installing just one other PAD series module

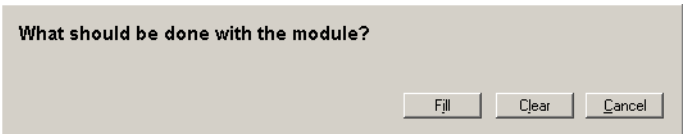
If the PAD module that you wish to install is already set to address 0, then the process is simple:

1. Remove the module that you are replacing, or the blank panel from the slot that you wish to plug your new/replacement module into.
2. DO NOT INSTALL THE PAD MODULE YET!! Get it ready, but do not plug it in. If it is a PAD-VTH8 module, you must have the mating connector already plugged into it, otherwise it will not be recognized properly. *PAD-TH8 and other PAD modules do not have this requirement - only the PAD-VTH8*.
3. Double-click on the name of the module, which is the AMPLIFIER column:



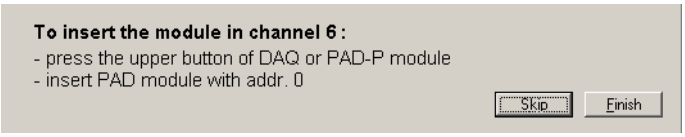
DOUBLE-CLICK ON THE NAME OF THE MODULE, LIKE "PAD-TH8-P" IN THE EXAMPLE ABOVE

4. and the software will ask you a question on the screen: WHAT SHOULD BE DONE WITH THIS MODULE? With three choices: ***Fill***, ***Clear***, or ***Cancel***. ***Fill*** allows you to add your new module. ***Clear*** removes any module from this slot. ***Cancel*** leaves here without making any changes. Click ***Fill*** to add your new module.



CLICK FILL TO ADD YOUR NEW MODULE...

5. The software will now instruct you to insert the PAD module with address 0 into this slot (in our example it is slot 0, but it could be any slot in your system). When you do this, it will recognize it and add it into this slot on the screen.

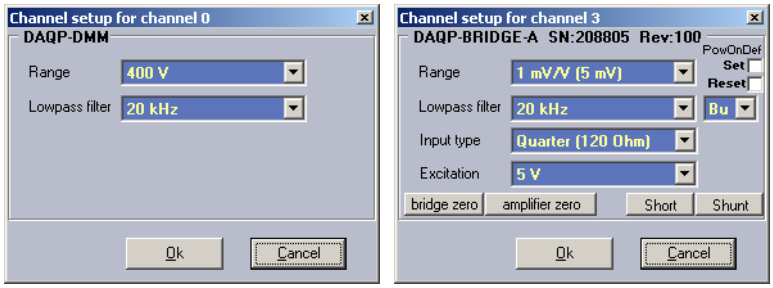


INSERT YOUR PAD MODULE, OR CLICK CANCEL TO LEAVE WITHOUT MAKING ANY CHANGES

Now just click the ***Set ch x*** button for this slot and configure it as you would any other PAD module. Notice that your configuration for the other modules is unchanged!

2.3 Selecting amplifier settings

Now let's look at the amplifier settings. As all modules are now installed, just click on the ***Set ch x*** button all the way on the right side of the table, for that amplifier. When you do, a settings dialog will appear:



THE CONTENT OF THE SETTINGS DIALOG BOX DEPENDS ON THE AMPLIFIER TYPE

As the functionallity depends on the module, also the settings dialog box will look different for each module. A short function description of each module is available in the overview table in section 1.

2.4 Saving your setup

That's all there is to it - all of your modules have now been set to the same address as the slot that they are in! It is prudent to stop right now and save this setup as something called "Default" or "Modules," or something easy to remember, as it can serve as a nice starting point for any number of setups. Setups are automatically stored in the \Setups subdirectory, and given an extension of .DCs (*D*ewe *C*onfig setup).

The setup can be stored in the ***File*** - ***Save Setup*** menu. ***Save Setup As*** can be used if you want to give the current setup a new name. Or simply press the ***Save Setup*** or ***Save Setup As*** buttons.

DEWEConfig will always start with the last stored setup.

2.4.1 Autostore function

When you leave DEWEConfig, all settings will be stored automatically in a setup file called **last.DCs**. This file is some kind of backup, for example if you forgot to store the changes, they won't be lost. When you start DEWEConfig again, it reads the settings out of the last.DCs file.

2.5 New setup / load setup

To create a new setup, just select ***New*** from the **File** menu or press the ***New*** button.

To load a new setup, select ***Open*** from the **File** menu or press the ***Open*** button.

3 Special functions within DEWEConfig

DEWEConfig offers a few small, but helpful functions.

3.1 Keep modules locked

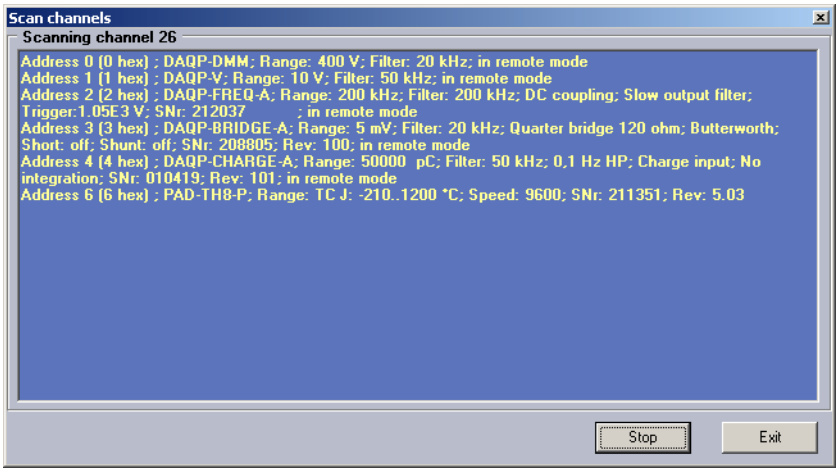
During the configuration within DEWEConfig, all push buttons on the amplifiers are locked. The only way to change settings is through the software. As soon as you leave DEWEConfig, the push buttons are working again.

If you want to avoid unauthorized or inadvertently activities on the push buttons after leaving DEWEConfig, you should activate the function ***keep modules locked on Exit of DEWEConfig***. This will lock the push buttons. You have to enter DEWEConfig again and deactivate this function to get access to the push buttons again.

'LOCKED MODULES' ACTIVATED

3.2 Scan all modules

With the ***ScanAllModules*** command in the **System** menu, DEWEConfig is looking through the whole system for any amplifiers, connected to the system. The result is a nice overview of the current modules and settings.


Scan channels
Scanning channel 26
Address 0 (0 hex) ; DAQP-DMM; Range: 400 V; Filter: 20 kHz; in remote mode
Address 1 (1 hex) ; DAQP-V; Range: 10 V; Filter: 50 kHz; in remote mode
Address 2 (2 hex) ; DAQP-FREQ-A; Range: 200 kHz; Filter: 200 kHz; DC coupling; Slow output filter;
Trigger:1.05E3 V; SNr: 212037 ; in remote mode
Address 3 (3 hex) ; DAQP-BRIDGE-A; Range: 5 mV; Filter: 20 kHz; Quarter bridge 120 ohm; Butterworth;
Short: off; Shunt: off; SNr: 208805; Rev: 100; in remote mode
Address 4 (4 hex) ; DAQP-CHARGE-A; Range: 50000 pC; Filter: 50 kHz; 0,1 Hz HP; Charge input; No
integration; SNr: 010419; Rev: 101; in remote mode
Address 6 (6 hex) ; PAD-TH8-P; Range: TC J: -210..1200 °C; Speed: 9600; SNr: 211351; Rev: 5.03
Stop
Exit

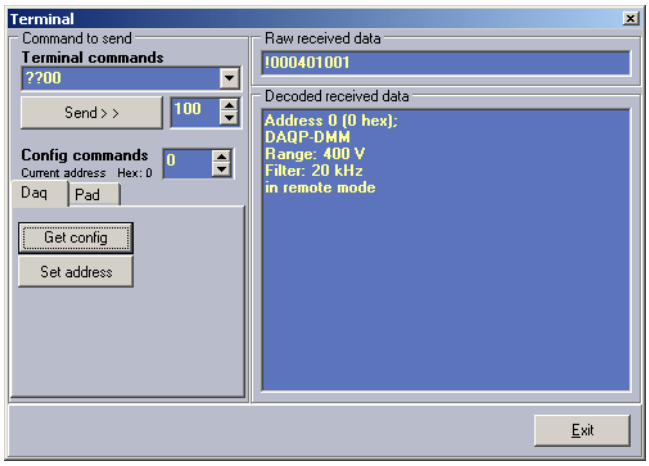
SETTINGS SUMMARY OF ALL DEWETRON MODULES IN THE SYSTEM

3.3 COM terminal

The COM terminal allows to send commands to all DAQP and PAD amplifiers and can also be used to check the serial communication. Any commands mentioned in the *DEWE-Modules technical reference manual* can be entered here for direct communication with the amplifiers.

ATTENTION: Wrong commands can disturbe the whole system!

To enter the com terminal, just select ***ComTerminal*** from the **System** menu.



COM TERMINAL EXAMPLE SHOWING INFORMATION OF A DAQP-DMM MODULE

3.4 Version information

Select ***About...*** from the **Help** menu or press the ***Info*** button to get the software version information. The software version number will be required for any support requests.

3.5 Terminate program

To terminate the program, just select ***Exit*** from the **File** menu, click on the WINDOWS close button or press the **Exit** button.

If you close the software, the last.DCs file will be created / updated.

To start the software again, just click on the DEWEConfig icon on the WINDOWS desktop.

4 Some hints

In the following section you find a few hints for using DEWEConfig.

4.1 Configuration changed

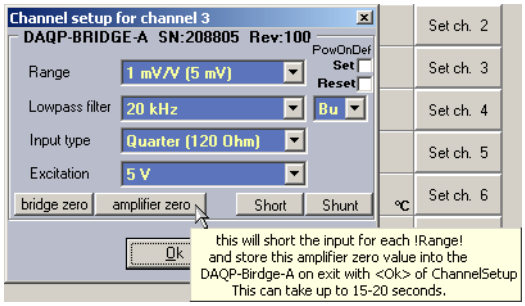
Maybe you have already recognized it, but there is a small sign which indicates that you have changed anything in the configuration.

As soon as there are any changes, a * will be added to the setup file name in the top of the window.

** INDICATES CHANGES IN THE SETUP*

4.2 Help text

No idea about the function of any button? No problem. Just move the mouse over it and wait a second - then you will get a short message about the button function.

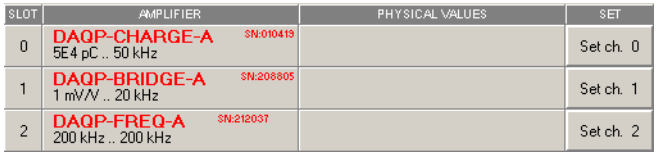


HELP FUNCTION FOR EACH BUTTON

Attention: This function is still under development, some buttons may not contain the help function.

4.3 Red module name?

The is a red colored module name in the amplifier list? This is a warning and means that anything is wrong with this entry.



EXAMPLE WITH THREE ERRORS

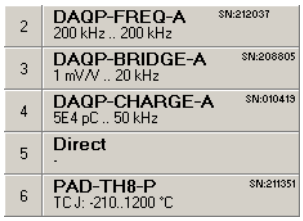
Possible errors:

- The module has been removed from the system
- There is an address conflict with another module
- There has been an communication problem with the module

To solve the problem, double click on the entry and Clear or Fill the entry (see also chapter 2). If the error is still mentioned, try the FillRack function. If the error is still displayed, contact DEWETRON.

4.4 Amplifiers serial number

For all newer amplifiers, DEWEConfig displays the serial number. This should help you to identify the amplifier, assign the corresponding sensors or help you finding the correct calibration information.



AMPLIFIERS SERIAL NUMBER MENTIONED NEXT TO THE AMPLIFIER NAME

The serial number will soon be available for all new amplifiers. Currently only the DAQP-BRIDGE-A and -B, DAQP-CHARGE-A and -B, DAQP-FREQ-A and the PAD-V8-P and PAD-TH8-P amplifiers use this function.

4.5 Interface settings

At the bottom of the screen, you can see the current interface settings (serial interface number, baud rate, data bits, parity, stop bits), the number of amplifier slots and also an internal version information.